Amendments

Please amend the above-identified U.S. application as follows:

In The Specification

On page 1, line 2, of the specification please insert the following:

- Related Applications

This application is a continuation of U.S. Patent Application Serial No. 09/342,422, entitled All-Optical Interconnect Utilizing Polarization Gates, which was filed on June 29.

In The Claims

Kindly cancel claims 1-39 without prejudice, and add new claims 40-77, as indicated below.

40. (new) An optical interconnect system comprising:

an optical interconnect device configured to selectively interconnect a plurality of electromagnetic signals between a plurality of inputs and a plurality of outputs:

said optical interconnect device having a plurality of selectively actuatable $2x^2$ optical switching elements and a plurality of all-optical signal paths extending